REMARKS

Applicant intends this response to be a complete response to the Examiner's 7 May 2008 Non-Final Office Action. Applicant has labeled the paragraphs in his response to correspond to the paragraph labeling in the Office Action for the convenience of the Examiner.

Preliminary Statement

Applicant has canceled withdrawn claims 37-38, 74-75 and 101-117 for simplicity of response and reduction of page size of response. Applicant expressly reserves the right to file divisional application relating to these canceled claims as they were withdrawn and canceled due to an election/restriction requirement.

Applicant points out that the cross-laminate of the present claims differ from any of the prior art due to the bonding structure that is manifest in the laminates. The strongest bonds are present in the laminates of this invention occur at crossing points of arrays of thin filaments that for a discontinuous layer disposed on the top of a bonding layer. Intermediate bonds are present where filaments of one layer is bonded to the bonding layer of the second layer. The weakest bonds (or non-bonds) are present where the bonding layer of one film contacts the bonding layer of a second film. Thus, the laminates of this invention include three bonding regions: strongest bonds at the crossing points between arrays of filaments making up discontinuous layers on the films, intermediate bonds at contact points or regions between filaments on one film and a bonding layer of the other film and weakest bonds at contact regions between bonding layers of the two film.

None of the prior art includes bonds between the filaments, let alone a three level bonding structure.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

The Examiner stated as follows:

> 1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 April 2008 has been entered.

Applicant acknowledges the Examiner's statements.

Claims

The Examiner stated as follows:

2. Claims 37-38, 74-75, 101-117 and 123-148 are pending with claims 37-38, 74-75 and 101-117 withdrawn and claims 123-148 new.

Applicant acknowledges the Examiner's statements. Applicant has canceled withdrawn claims 37-38, 74-75 and 101-117 for simplicity of response and reduction of page size of response. Applicant expressly reserves the right to file divisional application relating to these canceled claims as they were withdrawn and canceled due to an election/restriction requirement.

WITHDRAWN OBJECTIONS

The Examiner stated as follows:

3. The objections of record in the Office Action mailed 7 December 2007, page 4, paragraph 8 have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

Applicant acknowledges the Examiner's statements.

WITHDRAWN REJECTIONS

The Examiner stated as follows:

4. The 35 U.S.C. 112 rejections of claims 81, 95, 120 and 122 of record in the Office Action mailed 7 December 2007, pages 4-5, paragraphs 9-16 have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

5. The 35 U.S.C. 103 rejections of claims 118-122 of record in the Office Action mailed 7 December 2007, page 6, paragraph 18, as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et at. (US 3,687,764) have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

6. The 35 U.S.C. 103 rejections of claims 118-122, 77, 83, 85, 89, 93 and 96 of record in the Office Action mailed 7 December 2007, page 12, paragraph 19, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

7. The 35 U.S.C. 103 rejection of claim 78 of record in the Office Action mailed 7 December 2007, page 17, paragraph 20, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Johnston (US 3,340,128) have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

8. The 35 U.S.C. 103 rejections of claims 79-82, 86, 90, 94-95, 97-98 and 100 of record in the Office Action mailed 7 December 2007, page 17, paragraph 21, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Lappala (US 2,851,389) have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

9. The 35 U.S.C. 103 rejections of claims 87-88, 91-92 and 99 of record in the Office Action mailed 7 December 2007, page 23, paragraph 22, as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364), Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207) have been withdrawn due to Applicant's amendments in the Paper filed 7 April 2008.

Applicant acknowledges the Examiner's statements.

NEW OBJECTIONS

Specification

10. The specification is objected to as failing to provide **proper antecedent basis** for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(0). Correction of the following is required:

The Examiner contends as follows:

> The claims 144-146 refer to **color, coloration, colored,** *etc.* with respect to the appearance of the strands. The text of the Specification does not expressly have support for said language. If support is present in the figures then Applicant shall amend the Specification to include the text. If support is not present in the figures or the Specification then said language should be removed from the claims. Applicant is advised to review all claims to be sure textual support is present in the Specification and make any necessary corrections.

Applicant points to the following passages in the published application that speak to the strands being colored or having a color or the material out of which the strands are made being colored: Abstract; original claims 16, 17, 20, and 33; paragraphs [0003], [0044], [0080], [0086], [0090], [0092], [0100], [0129], [0132], [0154], [0159], [0164], [0165], and [0170]. Thus, Applicant believes that there is adequate support for strand having color, strands being colored or strands made of colored material. Applicant, therefore, respectfully requests withdrawal of this objection to the specification.

Claim Objections

The Examiner contends as follows:

> **11.** **Claim 142** is objected to because of the following informalities: the last line of the claim states "the the copolymer". This appears to be a typo.
> **12.** **Claim 148** is objected to because of the following informalities: claim #148 is dependent on itself, claim #148.
> Appropriate correction is required.

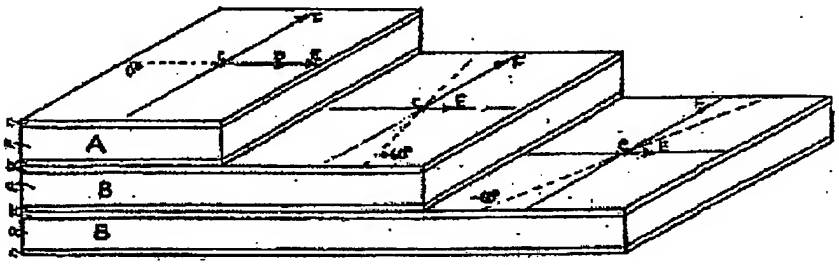
Applicant have amended claims 142 and 148 to correct these typographical errors. Applicant, therefore, respectfully requests withdrawal of these claim objection.

NEW REJECTIONS

13. **Claims 123-127, 136-137, 143-144 and 147-148** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et at. (US 3,687,764) and Britton (US 4,454,184).

The Examiner contends as follows:

Rasmussen (WO 01/96102) teaches a cross-laminate comprising a first coextruded film having a main direction of uniaxial unbalanced biaxial molecular orientation *(See p. 5, ll. 26-31 and FIG-2, cross laminate with multiple layers and sublayers.)*



The films A and B comprise heat seal layers #c, main layers #a and lamination layers #b, with individual compositions bonded to each other in the laminate as illustrated in FIG-2 as well as bonding of the layers when the layers are wrapped such as in a gusseted tube. Since the layers have different compositions the bonding and adhesive strengths are different. Since some portions of the laminate are bonded at the seam there are regions of some of the laminate substrates that have additional bonding that is not present in other regions *(See p. 2, ll. 42-58 p. 11, l. 25 to p. 12, l. 14, p. 5, ll. 26-31, p. 6, ll. 1-9 and FIG-2. Since Applicant has not defined precisely what is continuous or discontinuous, the Examiner interprets said terms to mean anything such as color, width, length, thickness, surface property, etc..)*, however, fails to expressly disclose wherein the various layers are continuous or discontinuous, have strands, and the bonding is different between the various layers and regions within the layer.

However, Rasmussen ('102) teaches where the structure is made into bags, wherein the layers are continuous when wrapped such as with a gusseted tube and as the layers progress to the opening(s) in the gusseted tube until the layers terminate, becoming discontinuous. Each layer clearly has a pattern whether it is substantially the same, including wave-shaped web with stabilized waves *(See p. 8, ll. 28-32.)*, within the layer or upon the bonded and non-bonded areas with various bonding strengths and the additional layers and or/markings will clearly be applied at various regions in discontinuous and continuous manners to provide for the desired messages *(See p. 6, ll. 1-9.)*. Pigments are added to the various compositions providing for further patterns *(See p. 11, l. 25 to p. 12, l. 14.)* for the purpose of providing a pleasing, strong bag for containing the packaged goods *(See p. 6, ll. 1-9.)*.

Furthermore, Rogosch ('784) teaches patterned multilayered laminated structures that are reinforced with discontinuous and continuous layers of strands and the bonding is varied based on region and layers to be laminated *(See col. 3, ll. 20-55 and FIGs 1 and 11, strands #18, 20 and 21.)* for the purpose of reinforcing a laminated structure (See *col. 1, ll. 15-26.)*.

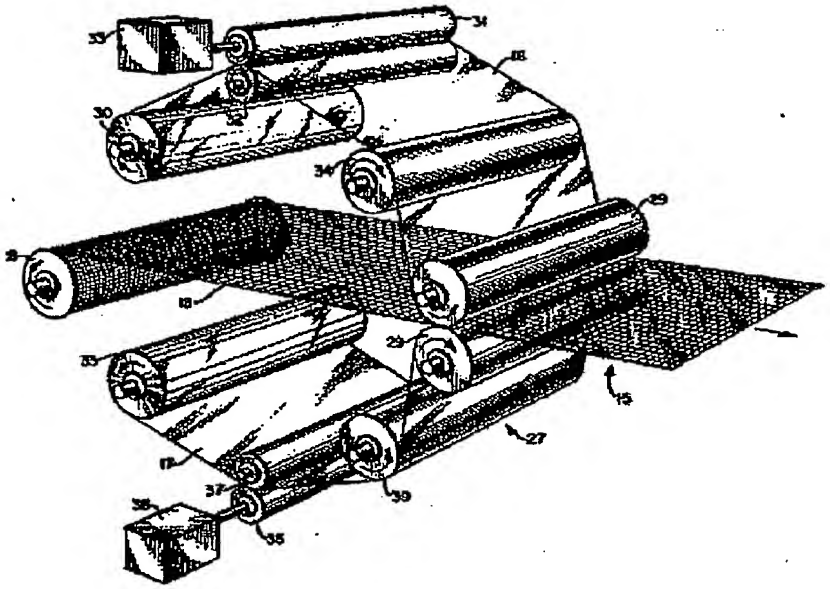


FIG. 1.

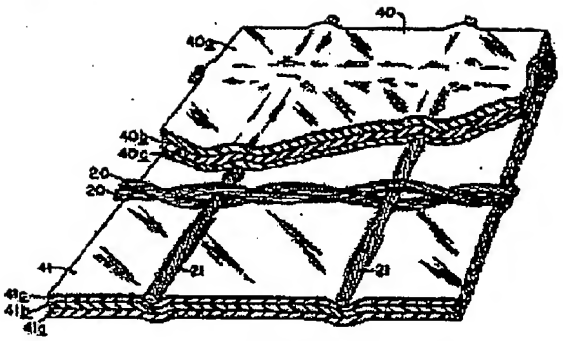


Fig. 11

Britton (184) teaches multiple layers 3, 4, 5 and 6 with strands #11a, #12a, #13a and #14a that are bonded to each other by adhesive where they cross each other *(See col. 2, ll. 42-58, col. 3, ll. 1-19 and FIGs 4 and 1.)*, continuous films having strands of adhesive above and below the strands with different polymers as illustrated in FIGs 4 and 1 where the strands are not a solid sheet thus discontinuous in the direction between the strands and where the adhesive is not discontinuous between the strands as illustrated in FIG-1 for the purpose of providing a strong laminate *(See col. 2, ll. 42-58, col. 3, ll. 1-19)*. Furthermore, combining layers with strands in various orientations and bonding is routine for a person having ordinary skill in the art.

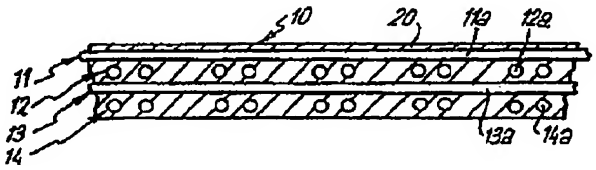
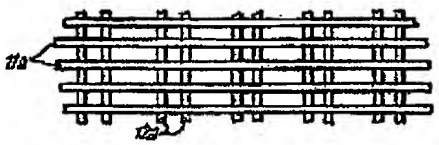


FIG. 1



Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to provide the above structure with a discontinuous, continuous and patterned structure as expressly taught by Rogosch ('784) and Britton (184) and obviously taught by Rasmussen ('102) in Rasmussen ('102) in order to provide a strong, pleasing multilayered laminate.

The phrases "adapted to ***" in claim 124, line 3, claim 127, line 2, and claim 143, line 2 do not limit the claims scope since said language does not limit the claim to a particular structure (See MPEP 2111.04).

For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "**consisting essentially of**" will be construed as equivalent to "comprising". See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention."). MPEP 2111.03 Also, If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). The "consisting essentially of' language is used in claim 141, line 2 and claim 142, line 6.

Applications have amended claims to clarify the nature of the discontinuous layer. The discontinuous layers comprise arrays of substantially parallel strands disposed on a top surface of a film – the arrays of the substantially parallel strands are the discontinuous layer.

Applicant disagrees with the Examiner's contention that Rasmussen '102 disclosed "a patterned layer disposed on a surface of the main layer." See Examiner's statement above.

In Rasmussen '102, the bonding layers (b) in Figs. 1-3 are all continuous layers and not discontinuous layers, *i.e.*, these layers are not discontinuous layers comprising arrays of parallel strands. In fact, Rasmussen '102 did not disclose or even suggest forming a discontinuous layer comprising arrays of thin strands disposed on facing surfaces of adjacent films – these strands are unique to this invention as are the bonding structures formed between the film due to the presence of the array of strands making up the discontinuous layers.

Moreover, Rasmussen '102 fails also to teach a bonding system for laminates that includes bond between the discontinuous layers – the points of intersection of the strands on one film and the strand of another film, or between the strands of one film and the bonding layer of the other film or between regions of each film devoid of strands comprising strands. The present invention includes such a bonding system comprising three different bond types having three different bond strengths. The Rasmussen '102 laminates include a single bond type having a single bond strength. Rasmussen

'102 makes no mention of multiple bond types.

While Rogosch et al. disclosed a multilayer reinforced plastic sheet material, the reinforcing web does not participate in the bonding process or participates only to a limited extent and is only between the outer layers and the web material. "The two sheets of material are bonded to each other in the interstices provided in the web" (Rogosch et al. at Col. 1, ll. 18-19. See also Rogosch et al. at Col. 2, ll. 36-39; Col. 6, ll. 47-49. Col. 8, 23-35 and Claim 1) and "very little direct adhesion is obtained between the inner ply of the ethylene-vinyl acetate thermoplastic and the woven scrim 18" (Rogosch et al. at Col. 8, 23-26).

The combination of Rasmussen '102 and Rogosch et al. would not result in the laminate of this invention or even suggest such a laminate. The combination produces a Rasmussen '102 type laminate with a Rogosch et al. reinforcing web interposed between the two facing continuous bonding layers (b) or within the structure of the two films, with bonding occurring in the interstices of the web and not at strand intersection points. In fact, the combination would include only a single discontinuous layer and even it the combination had multiple discontinuous layers (webs), direct web to web bonding would be precluded and no disclosure or teach suggests direct web to web bonding – the discontinuous layer does not directly participate in the bonding structure.

Britton did disclose discontinuous layers (**11, 12, 13, 14**) consisting of strands (**11*a*, 12a, 13*a*, 14*a***); however, the sheet material of Britton is prepared by completely surrounding the strands in a mass of an adhesive. Thus, Britton relates to a sheet material includes layers of strands embedded in a medium **20**. Britton at Col. 2, 49. Britton did not disclose or even suggestion forming bonds between intersection points between layers of strands. Thus, the bonding that occurs in Britton is between the adhesive during construction of the sheet from films comprising adhesive coated strand layers. Bonding between the strands and the adhesive is preformed in an applying step and not in a laminating step.

Moreover, in construction, Britton is similar to Rogosch et al., the resulting laminates have the discontinuous layer fully embedded within the film, with not direct contact between the discontinuous layers.

The combination of Rasmussen '102, Rogosch et al., and Britton results essentially in the same laminate as the combination of Rasmussen '102 and Rogosch et al. except that the nature of the discontinuous layers comprises substantially parallel strands. However, even with the discontinuous layer being substantially parallel strands, the combination does not disclose or even

suggest that bonding occur between the strands at crossing points or between strands on one film and non-strands regions of the other film in lines of intersection. The combination also dose not disclose or even suggest the bonding structure formed in the present laminates – three distinct bonding types, points, lines and regions.

Because the combination of Rasmussen '102, Rogosch et al. Britton does not disclose or even suggest laminates having discontinuous bonding layer disposed on mutually facing surfaces of adjacent films nor the bonding structure of the present invention comprising three distinct bonding types, points, lines and regions, the combination cannot render claims 123-127, 136-137, 143-144 and 147-148 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

14. **Claim 128-135 and 141** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764), Britton (US 4,454,184) and Lappala (US 2,851,389).

The Examiner contends as follows:

> Regarding claim 128, Rasmussen (102), Rogosch (764) and Britton ('184) teach the laminate discussed above, however, fail to expressly disclose where a collective area of the film A strands and film B strands comprises no more than 60% of a surface area of their respective film sides.
>
> However, Lappala ('389) teaches that any suitable diameter strand may be used *(See col. 2, l. 45, any suitable diameter can be used.)*, which clearly changes the above area ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to select a strand with a diameter that provides the above area ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong *(See coL 1, IL 25-28.)*.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes the Lappala does nothing to overcome the deficiencies in the combination. Lappala does disclose bundles of strands **1**. Lappala also shows the bundles crossing, but the bundles are not bonding at the point of crossing. Moreover, the bundles are not arrays of spaced apart strands. Furthermore, there is no direct strand to strand bonding.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claim 128 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner contends as follows:

> Regarding claims 129-130, Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above, however, fail to expressly disclose wherein a thickness increase of the films A and B at their respective strand locations is at most 20%/(10%) of a film thickness of the films A and B in adjacent regions of the films A and B devoid of their respective discontinuous layers.
>
> However, Lappala ('389) teaches that any suitable diameter strand may be used *(See col. 2, l. 45, any suitable diameter can be used.)*, which clearly changes the thickness increase. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness increase as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (See *col. 1, ll. 25-28.)*.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes the Lappala does nothing to overcome the deficiencies in the combination. Lappala does disclose bundles of strands **1**. Lappala also shows the bundles crossing, but the bundles are not bonding at the point of crossing. Moreover, the bundles are not arrays of spaced apart strands. Furthermore, there is no direct strand to strand bonding.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claims 129-130 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner contends as follows:

> Regarding claims 131-133, Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above, however, fail to expressly disclose wherein a volume of the film A strands and the film B strands is not greater than 15%/(10%)/(5%) of a volume of their respective films.
>
> However, Lappala ('389) teaches that any suitable diameter strand may be used *(See col. 2, l. 45, any suitable diameter can be used.)*, which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above volume as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (See *col. 1, ll. 25-28.)*.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes the Lappala does nothing to overcome the deficiencies in the combination. Lappala does disclose bundles of strands **1**. Lappala also shows the bundles crossing, but the bundles are not bonding at the point of crossing. Moreover, the bundles are not arrays of spaced apart strands. Furthermore, there is no direct strand to strand bonding.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claims 131-133

obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner contends as follows:

> Regarding claims 134-135, Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above, however, fail to expressly disclose wherein a distance from a center-to-center of adjacent pairs of strands in each array is between 2 mm and 40 mm/(at the highest 20 mm).
>
> However, Lappala ('389) teaches that any suitable pattern may be used *(See col. 2, l. 49-51, any suitable pattern.)* for the purpose of providing a laminate that is light and strong (See col. *1, ll. 25-28.)*.
>
> Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a suitable pattern that provides the above separation as taught by Lappala ('389) in Rasmussen (102) in order to provide a laminate that is light and strong.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes the Lappala does nothing to overcome the deficiencies in the combination. Lappala does disclose bundles of strands 1. Lappala also shows the bundles crossing, but the bundles are not bonding at the point of crossing. Moreover, the bundles are not arrays of spaced apart strands. Furthermore, there is no direct strand to strand bonding.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claims 134-135 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

The Examiner contends as follows:

> Regarding claim 141, Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above, however, fail to expressly disclose wherein the main layer of each of the two films A and B consists essentially of polyethylene or polypropylene.
>
> However, Lappala ('389) teaches wherein the main layer of each of the two films A and B is polyethylene *(See col. 2, l. 31 and ll. 66-67.)* for the purpose of providing a laminate that is light and strong *(See col. 1, ll. 25-28.)*.
>
> Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to make polyethylene layers as taught by Lappala ('389) in Rasmussen (102) in order to provide a laminate that is light and strong.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes the Lappala does nothing to overcome the deficiencies in the combination. Lappala does disclose bundles of strands 1. Lappala also shows the bundles crossing, but the bundles are not bonding at the point of crossing. Moreover, the bundles are not arrays of spaced apart strands. Furthermore, there is no direct strand to strand bonding.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claim 141 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

15. **Claim 138-140** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764), Britton (US 4,454,184) and Cederblad et al. (US 6,204,207).

The Examiner contends as follows:

> Rasmussen (102), Rogosch ('764) and Britton (184) teach the laminate discussed above, however, fail to expressly disclose wherein an average melting point of the third polymer material and average melting point of the sixth polymer materials are at least about 10°C/(15°C)/(20°C) lower than an average melting point of the first polymer material and an average melting point of the fourth polymer material.
>
> However, Cederblad ('207) teaches where the average average melting point of the polymer material of the layers of the films differ *(See col. 12, ll. 38-53.)* for the purpose of providing firm and light bonds *(See col. 6, ll. 60-67.)*.
>
> Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide strands with melting points below that of the films as taught by Cederblad ('207) in Rasmussen (102) in order to produce a laminate with firm and light bonds.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes that Cederblad does nothing to overcome the deficiencies in the combination. Cederblad relates to extruded netting. The netting comprises crossing strands of high melt point material and low melt point material. Bonding is achieve only via the low melt point material. The high melt point does not participate in bonding. Moreover, Cederblad does not disclose or even suggest bonding two of these discontinuous layers together. Furthermore, Cederblad discloses that the netting can be sandwiched between two fabric layer, which is similar to the Rogosch et al. and Britton laminates.

Because the combination of Rasmussen '102, Rogosch et al., Britton and Cederblad does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claims 138-140 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

16. **Claim 142** stands rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764), Britton (US 4,454,184), Rasmussen (US 4,039,364), Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207).

The Examiner contends as follows:

> Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above, and Rasmussen ('364) teaches a laminate wherein the main layers are made from HDPE, LLDPE or a blend of the two *(See col. 13, ll. 3-7.)* and the strands in the first surface layers of the films is selected from a polymer made from a copolymer of ethylene *(See col. 13, ll. 11-30.)*, however, fail to expressly disclose wherein the bonding layers comprise LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C, the discontinuous layers comprise a polymer with a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100 °C or a blend of such copolymer and LLDPE containing at least 25% of the copolymer.
>
> However, Velazquez (297) teaches bonding layers comprising LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C *(See col. 8, ll. 26-47 and col. 3, l. 46.)* for the purpose or providing a film that can be laminated with one or more films *(See col. 6, ll. 13-17.)*.
>
> Furthermore, Cederblad ('207) teaches wherein the discontinuous layers comprise a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 100 °C *(See col. 12, l. 42 wherein the melting point is 67 °C /152* °F.) for the purpose of forming firm bonds *(See col. 6, l. 63.)*.
>
> Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a laminate with a surface layer of LLDPE and ethylene with the above melting point range and the above strands as taught by Velazquez ('297) and Cederblad ('207) in Rasmussen ('102) to provide a laminate as described above.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton and the combination of Rasmussen '102, Rogosch et al., Britton and Cederblad here. The inclusion of Rasmussen '364 and Velazquez does nothing to overcome the deficiencies in the combination of Rasmussen '102, Rogosch et al., Britton and Cederblad.

Because the combination of Rasmussen '102, Rogosch et al., Britton, Rasmussen, Velazquez and Cederblad et al. does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claim 142 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

17. **Claim 145** stands rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764), Britton (US 4,454,184) and Johnston (US 3,340,128).

The Examiner contends as follows:

> Rasmussen (102), Rogosch ('764) and Britton ('184) teach the laminate discussed above,

however, fail to expressly disclose wherein the polymer material of the discontinuous layer of at least one of the films A and B comprises a coloration material in an amount, a coloration, or an amount and coloration to form a colored discontinuous layer sufficient to render the colored discontinuous layer visible through at least one side of the cross-laminate.

However, Johnston ('128) teaches where the polymer material of strands of at least one of the arrays comprises coloration material in sufficient amount to render the at least on colored discontinuous layer visible through at least one side of the cross-laminate *(See col. 24,* L 58.) for the purpose of providing a decorative motif *(See col. 24,11. 59-60.).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention was made to provide strands with coloration as taught by Johnston ('128) in Rasmussen (102) in order to provide a product having a decorative motif.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al. and Britton here and notes that Johnston does nothing to overcome the deficiencies in the combination.

Because the combination of Rasmussen '102, Rogosch et al., Britton, and Johnston does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claim 145 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

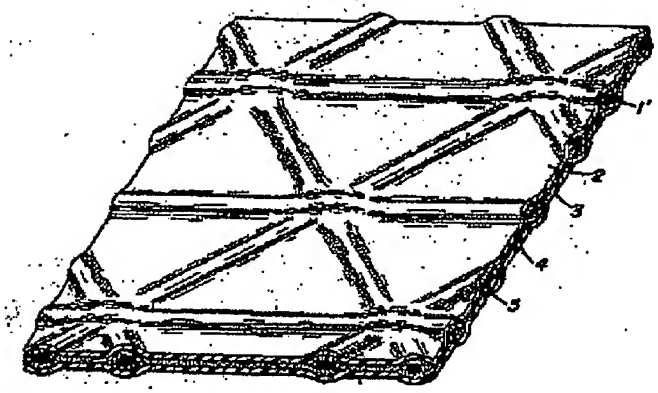
18. **Claim 146** stands rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen (WO 01/96102) in view of Rogosch et al. (US 3,687,764), Britton (US 4,454,184), Johnston (US 3,340,128) and Lappala (US 2,851,389).

The Examiner contends as follows:

Rasmussen (102), Rogosch ('764), Britton ('184) and Johnston ('128) teach the laminate discussed above, however, fail to expressly disclose wherein the cross-laminate has a thickness at its thickest of about 0.3 mm, and: wherein an exterior surface of the film A is corrugated to form a visible pattern of striations extending in one direction, where a spacing of the striations being at most about 3 mm: the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate, and a depth of the corrugations is sufficient to impart a three-dimensional effect to the cross-laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A.

However, Lappala ('389) teaches a laminate thickness at its thickest of about 0.3 mm *(See col. 3, II. 34-35 and col. 2, I. 45 wherein the films are less than 0.015 in (0.381 mm).),* the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate *(See FIG-3, #2.),* where the spacing of the striations being at most about 3 mm *(See FIG-3, corrugations created by strands.)* the main layer and the bonding layer of the film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from one of the exterior surfaces of the cross-laminate, and the depth of the corrugations being sufficient to impart a three-dimensional effect to the cross-laminate such that the strands appear to be spaced internally from the exterior surface of the film A a distance substantially greater than an actual maximum thickness of the film A *(See col. 2, 1. 7.),* for the purpose of providing a laminate that is light and strong *(col. 1,11. 25-28).*

FIG. 3



Therefore, it would have been obvious to a person of ordinary skill in the art the time of applicant's invention to provide such a spacing and configuration as taught by Lappala ('389) in Rasmussen (102) in order to provide a light and strong laminate.

Applicant reasserts his argument regarding the combination of Rasmussen '102, Rogosch et al., Britton, and Johnston here and notes that Johnston does nothing to overcome the deficiencies in the combination.

Because the combination of Rasmussen '102, Rogosch et al., Britton, Johnston and Lappala does not disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding, the combination cannot render claim 146 obvious. Applicant, therefore, respectfully requests withdrawal of this rejection.

ANSWERS TO APPLICANT'S ARGUMENTS

The Examiner contends as follows:

19. All previously elected claims have been canceled and replaced with new claims 123-148. Claim 123 is the only independent claim with a combination of limitations not previously presented. Thus, all claims have new combinations of limitations at least because of the new independent claim. All claims have new combinations of references cited as teaching the claims. Furthermore, Britton ('184) is no longer cited as a primary reference.

20. In response to Applicant's arguments (p. *21, paras. 1-2 of Applicant's Paper filed 7 April, 2008)* that Rasmussen ('102) does not teach a pattern, it is firstly noted that Applicant no longer teaches this limitation, thus, the argument is moot. Furthermore, Rasmussen ('102) does teach a pattern in the form of waves *(See p. 8, ll. 28-32.)*.

21. In response to Applicant's arguments (p. *21, para. 3 to p. 22, para. 1 of Applicant's Paper filed 7 April, 2008)* that Rasmussen ('102) does not teach strands, it is noted that the Examiner concurs and that is why other references are cited as teaching strands.

22. In response to Applicant's arguments (p. *22, paras. 2-4 of Applicant's Paper filed 7 April, 2008)* that the strongest bonds in Applicant's invention are not at the interstices but rather where the strands cross each other which is contrary to Rogosch ('764), it is noted that this relative bonding strength is the same for Rogosch ('764) as the web of strands is formed prior to lamination with the

other materials. Furthermore, Rogosch ('764) is cited for its reinforcement by the stranded web *(See col. 3, ll. 20-55.)*. Furthermore, Applicant's claims do not specify what is continuous and discontinuous in the claims.

23. In response to Applicant's arguments (p. *24, paras. 1-4 of Applicant's Paper filed 7 April, 2008)* that Britton's ('184) strands are not bonded and do not teach the specified orientation, it is firstly noted that Britton's ('184) strands are clearly bonded to each other by the adhesive. Furthermore, Rasmussen ('102) is cited as teaching the orientation of the laminate, not Britton ('184). Britton ('184) is cited for teaching how strands are incorporated into multilayered laminates in a crossing manner as illustrated in FIGs 1 and 4.

24. In response to Applicant's discussion *(pp. 25-29 of Applicant's Paper filed 7 April, 2008)* regarding the dependent claims and the other secondary references, it is noted that no further precise arguments are presented.

Applicant notes that none of the references taken individually or in any combination disclose or even suggest arrays of spaced apart strands disposed on the surface of a film nor a bonding structure including two bond types that directly involve the strands – strand to strand bonding and strand to bonding layer bonding of the laminates of this invention. It is the ability for the structures of this invention to provide a three level bonding system, with strong bonds occurring that points of intersection between arrays of crossing parallel spaced apart strands that forms one of the unique features of the laminates of this invention, a feature not disclosed or even suggested in any of the prior art. Additionally, the three types of bonding, points, lines and regions, are not disclosed or even suggested in the prior art references taken individually or in any combination.

Having fully responded to the Examiner's Non-Final Office Action, Applicant respectfully urges that is application be passed onto allowance.

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicant's attorney Robert W. Strozier at 713.977.7000

The Commissioner is authorized to charge or credit Deposit Account 501518 for any additional fees or overpayments.

Respectfully submitted,

Date: **September 8, 2008**

Robert W. Strozier, Reg. No. 34,024